

Model lighting 11/2006

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Next tradefair to visit us:

Faszination Modellbau in Sinsheim 09.-12.03.2006

Please note:

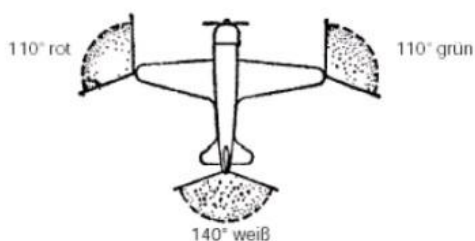
This catalog is only partially in english language.

Additional information as well as actual prices are to be found on our homepage and in our webshop on <http://www.flugmodellbau.biz>. This homepage and shop are reference.

Model lighting general information

If you want to „scale“ equip your modelplane or helicopter with lighting, please consult the following sources first:

1. Legal sources (for general placing of lighting products)
2. Your original plane for special placement of lighting products.



First of all: Your model is different from others. Without good sources of information about the type and the special model of plane you build you are nearly lost and only able to guess where which lighting product applies. Please take the following as general hints:

1. Positionlights:

According to (german) law, planes have the following position lamps as shown in the picture above.

Positionlights may be permanent lights or beacon lights. If they are beacon lights, one may equip the plane with additional lights as follows:

- a) A read light in the rear (color: read) blinking in the pause of the white light
- b) A wight light in the left and right wing blinking in the pause of the red/green light.

There are special rules for water planes which are too complicated for this comprehension.

2. Anticollision light, Beacon

Planes, Helicopters and other flying items are to be equipped with anticollision lights (beacons). These beacons should be seen from all directions between 30° over and 30° under the flying horizontal. They may not interfere the sight of the position lights.

Normally you will find white Beacons at the end of the wings near the position lamps and red Beacons above or under the fuselage.

3. Head lights

There are no general rules where the headlights have to be. Please consult your scale documentation and your photos regarding this. Most of the times, head lights are placed in one or more of the following places:

- In the nose of the wings
- In tiptanks
- In the cowling
- At the landing retract.
- In special cases, they are hidden and only exited from fuselage or wing when landing

Our model lighting solutions are designed to create model lighting that meets the needs documented above. We have several products that you may use to combine to a complete model lighting solution. Please refer to the following pages for more information.

Choose your lighting solution

As mentioned before you should consult your scale documentation and plane photos before deciding for a lighting solution. If you have every information you can get, please refer to the following table to choose for the products needed. In case there are any further questions don't hesitate to contact us.

	Beacon Mini	Beacon EVO	Rot. Beacon	Head- light. EVO	Multi- light mini
Functions					
- Anticollision lights (Beacons)	X	X			X
- Rotating Beacon			X		
- Positionlights		X		X	X
- Headlight		⁵⁾		X	X
All functions switchable by RC	X	X	X	X	X
LEDs / Lamps					
- Ultrabright LEDs	X	X			
- SMT LEDs (Flashleds)	X	X	enthalten	X	X
- Lumiled 1W Emitter	X	X		X	X
- Lumiled 3W Emitter				X ^{1) 2)}	X ^{1) 3)}
Special features					
- External current source		X	X	X	X ⁴⁾
- Voltage supply 4,8-6V	X				X
- Voltage supply 4,8-8,4V		X	X	X	
- RC cables	1	1	1	1	1-2
- Additional switching channel					1

1) Using several outputs parallel. Less lamps per electronic module

2) Only one Lumiled 3W-Emitter per electronic module possible

3) With additional booster module, to be ordered separately

4) External current source standard, may be used with appropriate double power source

5) Possible, but not recommended

General hints:

- If you only want beacon lights, choose Beacon mini or Beacon EVO
- For beacon lights and position lights use Beacon EVO or Multilight if more lighting power is needed.
- Position lights can be realised easily with the headlight moduls.
- Headlights are possible with the headlight module, Multilight and Beacon EVO (The last one not recommended)
- If you need a complete model solution, choose for Multilight.

Lighting sets

For general purposes as well as for spezial scale models. Always completed with all parts recommended, partially cabled and / or with spezial parts.

General purpose

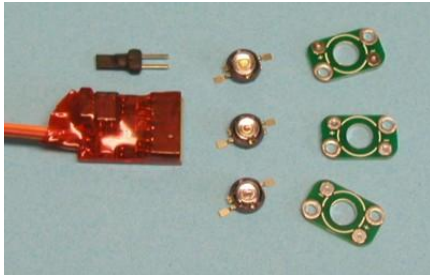
Bestell-Nr.	Beschreibung	Preis (€)
Bevo-E5	Beacon EVO with fünf Luxeon Emitter 3x white, 1x red, 1x green, mounting material ... for scale positionlamps and beacon	€ 114,00
BMLE	Baustein Beacon mini with three Luxeon Emitter Colour: (white, red, green), other combination possible	€ 59,00
MLM-Set6	Multilight mini with six Luxeon Emitter for scale positionlamps and beacons. Option: up to two additional headlights	€ 159,00

Scale-Sets

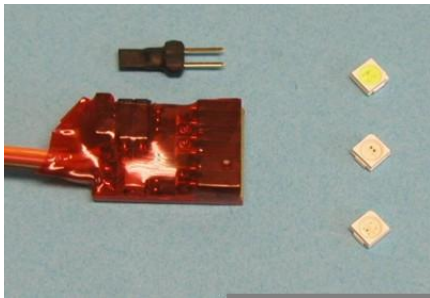
Bestell-Nr.	Beschreibung	Preis (€)
Bevo-RB55 Bevo-RB36	Scale Set for PPL or motor gliders with spezial wing tip assemblies (see page 8, choose from two different models) plus additional Luxeon Emitter for read end.	€ 139,00
MLM-RB55 MLM-RB36	Scale Set for PPL or motor gliders with spezial wing-tip assemblies (see page 8, choose from two different models) plus additional Luxeon Emitters (two) for read end. Option: up to two additional headlights.	€ 189,00
Bevo-CS	„Cirrus-Set“ Scale-set for motorgliders with spezial wing-tip assembly plus one headlight assembly	€ 159,00
MLM-PC21	Scale-Set for Pilatus PC-21 and similar, with three headlights (2x Taxi, 1x Landing light), special rear beacon, Blitzer for fuselage plus assemblies for the wings (positionlamps). Scale 1:4 und 1:5	€ 270,00
BS-Hawk	Scale Set für „BAE-Hawk“ and similar models, consisting of a complete position light and beacon set plus one headlight with separate elektronik board.	€ 179,00

Beacon Mini (Anticollission lights)

Small and lightweight solution, but very powerful. (20x16x4mm, <5g Weight!). You may connect ultralight LEDs, SMT LEDs (Flashleds) or Lumiled Luxeon Emitter to this module. Beacon mini provides three outputs with max. current of 0,5A in flashing mode.



Choose the version with Luxeon Emitter for a maximum of light at your model. Viewing angle is the widest available with 140°. You will see this beacons at daylight from around 100 to 200m.



For small and lightweight models use the version with SMT LEDs. They may even be used in situation when you do not have the space for a Flashled. Light intensity is around one quarter of a Luxeon Emitter but viewing angle is almost the same (around 120°). Use this solution especially for indoor models.

The version with ultrabright LEDs is still available but not yet recommended due to the small viewing angle.

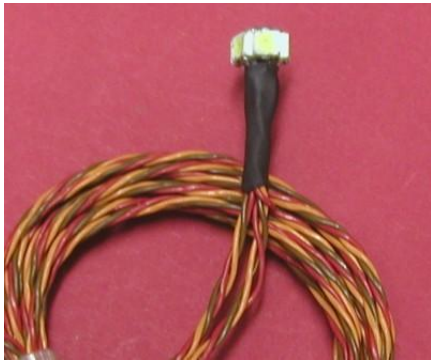
Choose from eight different flashing programs. Beacon mini may be used with your RC Equipment for switching your Beacon lights on or off.

Beacon mini will be provided in a set with lamps, programming shunt and mounting material if applicable.

Bestell-Nr.	Beschreibung	Preis (€)
BMLD	Baustein Beacon mini with three ultrabright LEDs (Colors red, green, white, choose your combination)	€ 25,00
BMLF	Baustein Beacon mini with three SMT-LEDs (Colors red, green, white, choose your combination)	€ 44,00
BMLE	Baustein Beacon mini with three Luxeon Emitttern (Colors red, green, white, choose your combination)	€ 59,00

Additional products are to be found at page 7

Rotating Beacon



Rotating Beacon simulates the rotation of a beacon light as found on helicopters or other special models.

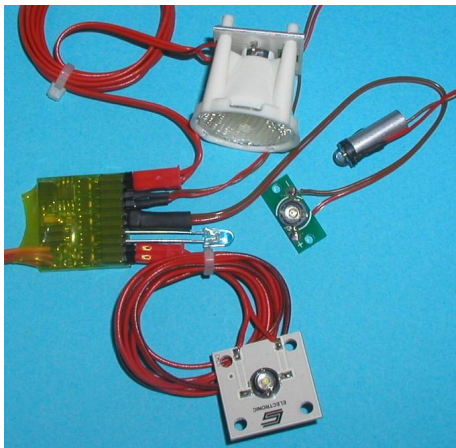
Features:

- Use with or without RC-control.
- Use with or without separate current source.
- Optoelectronic input, when used with separate current source.
- Up to three rotation lighting elements possible per electronic module

We deliver a complete product with white or red rotation lighting element.

Bestell-Nr.	Beschreibung	Preis (€)
BevoR	Module Rotating Beacon EVO ready to light with cable and lighting element mounted (choose from colors red or white)	€ 89,00

Beacon EVO (Positionsblitzer, -lichter)



Beacon EVO ist the lighting solution for positionlights and Anticollision lights in one module. Both functions can be switched on and off from RC (3-function switch, one channel)

Refer to the picture on the left to see the different lighting solutions possible.



Highlights:

- 12 Programs for different purposes.
- Use with or without RC control.
- Easy programming with servo tester or your RC-Equipment.
- Separate current source or use with your high power current source installed.
- Small and lightweight solution (15g)

For individual solutions ask for our programming service.

For your convenience there are different sets of the module with Luxeon Emitters which we recommend to use. These sets are complete with mounting material and every thing necessary.

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Bestell-Nr.	Beschreibung	Preis (€o)
Bevo3	Module Beacon EVO with three Luxeon Emitters. (Colors red, green, white, choose your combination)	€ 88,00
Bevo5	Module Beacon EVO mit fünf Luxeon Emitter (Colors red, green, white, choose your combination)	€ 114,00
BevoR	Rotating Beacon EVO mit komplettem Leuchtsatz (Colors red or white, please choose)	€ 89,00
Bevo	Module Beacon EVO without Emitters	€ 49,00

Additional products are to be found at page 7

Headlight / Positionlight EVO



For largescale models, jets, helicopters or wherever you need a lot of light. Headlight EVO allows the connection of up to three 1W Luxeon Emitter or one 3W-Emitter. Other lighting products like Flashleds may be connected as well. Lighting intensity may be controlled via RC in programming mode.

- Use this module with or without RC-control.
- Use this module with or without separate current source

- Lighting modules have a lens with 17, 22 or 31mm. and a viewing angle between 30 and 45 degrees. We have a 50mm lens with three 1W Emitters to be used. (One per electronic module)
- Separate current source possible.
- Use with or without RC-control.
- Delivery complete with electronic module, lighting module (choose lens diameter)

Bestell-Nr.	Beschreibung	Preis (€o)
SV3	Module head light with one lighting module (17, 22, 31mm) 3Watt-type: add €10,00	€ 69,00
Lev3	Additional lighting module 1W, diameter of lens 17, 22, 31mm. 3Watt-type: add €10,00	€ 34,89
Lev3-50	Zusätzliches Leuchtmodul mit drei weissen Luxeon Emittern 1W, Durchmesser Reflektor 50.	€ 74,89

Additional products are to be found at page 7

Multilight mini



Use this lighting module for a complete lighting solutions for up to eight Luxeon Emitter and one 5A switching channel. More lighting possible with additional booster modules.

Features:

- flexible lighting programs and switchpoints
- Use with or without RC control (1-2 RC channels)
- Use with Luxeon Emitters or Flashleds
- All lighting moduls with lenses etc. may be used.
- Number of headlights, beacon lamps and position lights can be choosed individually.

If you need a special solution ask for our programming service but we hope to have everything included ;-)

Bestell-Nr.	Beschreibung	Preis (€)
Mlo	Module Multilight Beleuchtungsbaustein without lighting modules	€ 96,00

Additional products are to be found at page 7

Lumiled 1W Emitter

Only best brightness selection. Use appropriate cooling for permanent lights

Bestell-Nr.	Beschreibung	Preis ab 1
LEws	Luxeon Emitter 1W, Farbe weiss, Abstrahlcharakteristik Lambertian, Abstrahlwinkel 140°	€ 11,90
LErt	Luxeon Emitter 1W, Farbe rot, Abstrahlcharakteristik Lambertian, Abstrahlwinkel 140°	€ 11,90
LEgn	Luxeon Emitter 1W, Farbe grün, Abstrahlcharakteristik Lambertian, Abstrahlwinkel 140°	€ 11,90
Lev3	Zusätzliches Leuchtmodul mit weissem Luxeon Emitter 1W, Durchmesser Reflektor 31mm oder 22mm.	€ 34,89
Lev3-50	Zusätzliches Leuchtmodul mit drei weissen Luxeon E-mittern 1W, Durchmesser Reflektor 50.	€ 74,89

SMD Powerled

Use when you do not have the place for a Luxeon Emitter. 1/4th of the brightness of a Luxeon Emitter but very small (see info-section)

Bestell-Nr.	Beschreibung	Preis ab 1
LEFws	SMD LED 5x5mm, 7-8 Lumen, 120°, 3,6V, 60-80mA, Farbe weiss	€ 6,95
LEFrt	SMD LED 5x5mm, 7-8 Lumen, 120°, 2,65V, 140m, Farbe rot	€ 6,95
LEFgn	SMD LED 5x5mm, 7-8 Lumen, 120°, 3,2V, 60-80mA, Farbe grün	€ 6,95

Headlight modules with lens and cooling

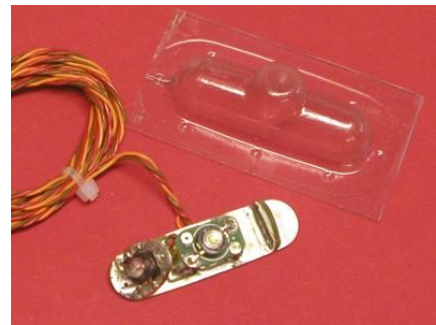
All modules sold are premanufactured and delivered with cabling attached. 3W-Options are available for each type except Lev3-6x6. Please ask for prices and electronic equipment.

Bestell-Nr.	Beschreibung	Preis ab 1
Lev3-6x6	 NEW: 1W SMT High-Power LED Lens 30° and additional lens 11mm or 18mm, mounted on cooler.	€ 29,90
Lev3-19	 Diameter 17-19mm	€ 29,90
Lev3-22	 Diameter 22-24mm	€ 29,90
Lev3-31	 Diameter 31mm	€ 29,90
Lev3-50	 Diameter 50mm (Three Luxeon Emitter, cooler + Mounting plate)	€ 64,90

Wing Tip assemblies



Scale assemblies for motorplanes and motor gliders. Fit for scale 1:4 and 1:5, for some models at 1:3 as well.



We deliver those assemblies completely mounted with cabling attached. There are two different forms available. Delivered with clear covers as well.

Price for one set (two pieces, one red/white and one green/white): **€ 79,90**

Drop type assemblies



The drop type assemblies are available in three different sizes and four different types. The largest one contains two lumileds. The assemblies are complete with lumiled(s), cooling / mounting and cabling / cover.

Bestell-Nr.	Beschreibung	Preis ab 1
RBT25x10	NEU: Set Positionlamps, 1x red, 1x green, Length 25mm, Width: 10mm	€ 49,00
RBT30x12	NEU: Set Positionlamps, 1x red, 1x green, Length 30mm, Width: 12mm	€ 49,00
RBT40x16	NEU: Set Positionlamps, 1x red, 1x green, Length 40mm, Width: 16mm	€ 49,00
RBT40x162L	NEU: Set Positionlamps / Beacons, 1x red/white, 1x green/white, Length 40mm, Width: 16mm	€ 69,00

Canopies




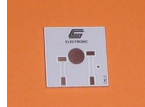


Different forms and sizes for various purposes. Halfround and elliptic style.

Drop-style forms will be available until end of 2006



Bestell-Nr.	Beschreibung	Preis (€)
LAR10	halfround, Diameter 10mm	€0,23
LAR15	Halfround, Diameter 15mm	€0,41
LAR20	Halfround, Diameter 20mm	€0,52
LAR25	Halfround, Diameter 25mm	€0,70
LAR30	Halfround, Diameter 30mm	€1,04
LAe25x16	Elliptic style, area: 25x16mm	€0,46
LAe30x20	Elliptic style, area: 30x20mm	€0,64
LAR42x28	Elliptic style, area: 42x28mm	€0,93
LASort	Assorted set, all halfround (two pieces each) and all elliptic style (three pieces each)	€10,00 Ab 3: €9,51 Ab 10: €8,93
LAT25x10	Drop style, Basic dimensions: 25x10mm	€1,00
LAT30x12	Drop style, Basic dimensions: 30x12mm	€1,20
LAT40x16	Drop style, Basic dimensions: 40x16mm	€1,50
LATSort	Set drop style canopies, two per size, six total	€6,90

Cooling / Mounting

Bestell-Nr.	Beschreibung	Preis (€)
	Mounting plate for Beacon lamps 18x10mm (Orderno.: LEM)	€1,00
	Heatsink for Luxeon Emitter 1W 25x25x1,5mm (Order No.: LEK)	€4,64
	Tube Cooler, Diameter 7mm x 30mm. Glue on Emitter with special glue (below) (Order No.: LEKr)	€0,90
LEKrs	Tube cooler, special edition with slots for cables	€2,50
	Special heat sink glue for Luxeon Emitter (Order No.: LEW)	€2,90

Contact:

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